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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,898	09/25/2003	William J. Masek	LOT920030024US1	5987

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EXAMINER

MITCHELL, JASON D

ART UNIT	PAPER NUMBER
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2193

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

Office Action Summary	Application No. 10/670,898	Applicant(s) MASEK ET AL.	
	Examiner Jason Mitchell	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-18 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-18 and 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to an amendment filed on 1/18/08.

Claims 1-9, 11-18 and 20-26 are pending in this application.

Response to Arguments

In the first par. on pg. 8, the applicants state:

The Office cites col. 12, lines 21 - 23 in Dugan as anticipating the claimed feature of identifying application protocol interface (APIs). Page 3 of current Office Action. By this assertion, the Office equates Dugan's commands with the claimed APIs. However, col. 5, line 57 - 59 in Dugan defines "[a] 'command' is a series of program instructions ... [that] cause the computer ...to perform a user function...". That is, all of the commands from command module listed in list box 272 are directed specifically to user function. According to Dugan at col. 6, lines 28 - 30, "[a] 'user', sometimes also referred to as a 'client', is a person who accesses and interacts with an application program via a network connection". By these definitions, Dugan's test tool program is directed to a human user for interacting with an application, which requires a graphic user interface (GUI) for proper implementations and not applications programming interfaces (APIs) as in the claimed invention. Specifically, "[a] **graphical user interface (GUI)** is a type of user interface which allows people to interact with a computer and computer-controlled devices which employ graphical icons, visual indicators or special graphical elements ... to represent the information and actions available to a user. The actions are usually performed through direct manipulation of the graphical elements."

(http://en.wikipedia.org/wiki/Graphical_user_interface). Further support is disclosed in Fig 1 and col. 6, lines 56 - 60 in Dugan, which recites a GUI in the form of a user interface of test tool program having "a main window 140 ... that a test operator may ... operate..." "An **application programming interface (API)** is a source code interface that a computer system or program library provides to support requests for services to be made of it by a computer program [and] itself is abstract, in that it specifies an interface and does not get involved with implementation details."

(<http://en.wikipedia.org/wiki/API>). Examples of APIs include: Single UNIX Specification (SUS), Microsoft Win32 API, Java Platform, Enterprise Edition APIs. Since an API is source code interfaces, it is not equivalent to a GUI or the commands in the command module. Therefore, Dugan does not disclose the claimed feature of "identifying application protocol interfaces (APIs) associated with the test application". Claim 1. Accordingly, Applicants respectfully request that the Office withdraw this rejection.

The applicants' arguments misinterpret both the rejection and the reference. First the rejection intended to map Dugan's "Command Module" to the claimed API and not Dugan's GUI. Second Dugan's "commands" are disclosed as part of a "test script" and not as a user interacting with the GUI. The user interaction to which the applicants refer is part of the development of the test script (*see e.g. col. 13, lines 59-62 "a test operator [can] create test scripts containing ... command module commands"*). In other words, Dugan's user selects "commands" (*which represent "user functions" of the application being tested*) to be placed in a test script which is then executed.

However upon further consideration it has been determined that Dugan's "command module" is disclosed as an integral part of the test tool (*e.g. a VB module see col. 14, lines 22-28*). While Dugan's "command module" provides much of the functionality of an API (*see e.g. col. 13, lines 59-67*) it is distinct from an API because API are external to an application.

Additionally it is noted that the asserted definition of an API (*i.e. an interface without an implementation*) appears to be narrower than that commonly used in the art. Specifically the Wikipedia article cited by applicant also states that "An application programming interface (*API*) is a set of functions, procedures, methods, classes or protocols ... to support requests made by computer programs". Those of ordinary skill in the art would understand this to indicate that the functionality (*implementation*) is included as part of an API (*similarly see the Microsoft Computer Dictionary 5th ed.*). Finally it is noted that the claims and specification refer to an Application *Protocol* Interface and not an Application *Programming* Interface. However it is clear to the

Art Unit: 2193

examiner based on the description in the specification and the applicants' remarks that these are intended to refer to the same thing.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 20 depend from canceled claims 10 and 19, respectively. Accordingly the intended scope of the claims is not clear. For the purposes of this examination claims 11 and 20 will be treated as depending from claims 9 and 18 respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-9, 11-14, 16-18, 20-23 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,002,871 to Duggan et al. (Duggan) in view of US 5,987,517 to Firth et al. (Firth).

Art Unit: 2193

Regarding Claims 1, 9 and 18: Duggan discloses:

providing a test application that satisfies reentrancy requirements (*col. 21, lines 57-61 'Each session is ... reentrant'*) on a client (*col. 5, lines 18-21 'the test tool ... runs on a single computer'*);

identifying command modules associated with the test application (*col. 12, lines 21-23 "A list box 272 contains a list of all of the commands in the command module created for testing a given application program", the command module is inherently identified to the list box in order for the list box to present all of the commands from that module; col. 14, lines 22-28 "the command module is implemented as a Visual Basic 5.0 code module, Each command of the command module comprises a Visual Basic subroutine that contains the instructions for the execution segment of the command"*);

providing a test script capable of invoking the command modules (*col. 13, lines 59-62 "a test operator [can] create test scripts containing ... command module commands"*); and

instantiating a plurality of instances of the test application using threads (*col. 21, lines 57-61 'Each session is executed as a separate thread'*), wherein the instantiating and execution of each of the plurality of instances of the test application occur within a single process (*col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions'; col. 21, lines 57-61 "It is the multi-threaded, reentrant nature of the test tool program code"*).

Duggan does not explicitly disclose the command module implemented as APIs.

Firth teaches the use of APIs (*col. 2, lines 63-67 "functions in the Internet API reside in a dynamic link library (DLL)"*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Duggan's command module (*col. 14, lines 22-28 "the command module is implemented as a Visual Basic 5.0 code module"*) as an API and to provide a data entry field in the GUI to identify particular API's for use with the application under test. Those of ordinary skill in the art would have been motivated to do so because Firth's APIs "eliminate the need to embed source code directly in an application program to manage Internet application protocols" (*col. 2, lines 64-67; also see Duggan col. 16, lines 9-15 "each command simulates a real user's interaction ... by generating ... an HTTP request"*) and thus provide further abstraction for Duggan's test script development (see e.g. *col. 13, lines 59-67 "No knowledge of the underlying programmed instruction of the command module is needed by a test operator"*; *col. 14, lines 2-4 "The command module is rewritten and/or customized for each different application program to be tested"*).

Regarding Claim 2: The rejection of claim 1 is incorporated; further Duggan discloses; and

upon execution, the test script instantiates the plurality of instances of the test application (*col. 5, line 67-col. 6, line 3 "the test tool program executes multiple*

Art Unit: 2193

concurrent sessions') using threads (col. 21, lines 57-61 'Each session is executed as a separate thread') within the single process (col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions'; col. 21, lines 57 "It is the multi-threaded, reentrant nature of the test tool program code").

Regarding Claims 3, 14 and 23: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses the server application is a network application (*col. 5, lines 9-12 'a test tool for testing application programs ... over a network'*).

Regarding Claims 4, 12 and 21: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses the reentrancy requirements dictates that the plurality of instances of the test application be run within the single process without interfering with each other (*col. 21, lines 57-61 'reentrant nature of the test tool'*).

Regarding Claims 5, 13 and 22: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses each of the plurality of instances of the test application corresponds to a separate thread (*col. 21, lines 57-61 'Each session is executed as a separate thread'*), and wherein each of the separate threads is associated with a different connection to the server (*col. 5, line 66-col. 6, line 3 'A "session" refers to the execution of one test script, on one client connection'*).

Art Unit: 2193

Regarding Claims 7, 16 and 25: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan discloses the plurality of instances of the test application simulate use of the server application by a plurality of users (*col. 6, lines 47-51 'the test tool program ... is capable of executing test scripts ... based on a user list'*).

Regarding Claims 8, 17 and 26: The method of claim 1, 9 and 18 further comprising collecting data corresponding to the test (*col. 8, lines 4-6 'The test tool program ... provides four options for logging information'*).

Regarding Claims 11 and 20: The rejection of claims 9, and 18 are incorporated respectively, further; Duggan discloses, and wherein upon execution, the test script instantiates the plurality of instances of the test application (*col. 5, line 67-col. 6, line 3 'the test tool program executes multiple concurrent sessions'*) using threads (*col. 21, lines 57-61 'Each session is executed as a separate thread'*) within the single process (*col. 21, lines 53-57 'The basic module 12 is also responsible for initiating multiple, concurrent sessions'*).

Claims 6, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,002,871 to Duggan et al. (Duggan) in view of "The Java[™] Virtual Machine Specification" by Lindholm et al (Lindholm).

Art Unit: 2193

Regarding Claims 6, 15 and 24: The rejection of claims 1, 9 and 18 are incorporated respectively, further; Duggan does not disclose the process comprises a JAVA virtual machine.

Lindholm teaches that JAVA programs, which run on a JAVA virtual machine were well known at the time of the invention, and that JAVA programs and the JVM provided benefits known to those of ordinary skill in the art.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to implement Duggan's 'test tool' and 'basic module' in the JAVA programming language and execute them on a JVM.

Conclusion

In view of the new grounds of rejection **this action is made NON-FINAL.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571)272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/
Examiner, Art Unit 2193